

OUR ASTRONOMICAL COLUMN

THE REAPPEARANCE OF PONS' COMET OF 1812.—Probably the comet discovered by Mr. Brooks at Phelps, N.Y., on September 2, would have been earlier identified with the expected comet of 1812, had not the sweeping ephemerides issued by MM. Schulhof and Bossert been confined to an arc of $\pm 90^\circ$ of true anomaly, whereas the comet has been detected at an orbital angle of 113° from the perihelion—a greater distance than might have been anticipated. In the *Comptes Rendus* of September 17 they have made a provisional correction of the orbit, fixing the perihelion passage to 1884, January 25·82434 M.T. at Berlin. The following positions are extracted from an ephemeris accompanying the communication:—

At Berlin Midnight

	R.A.	Decl.	Log. distance from earth.	I.
	h. m. s.			
Oct. 5 ...	16 29 48 ...	+57 55·7 ...	0·2984 ...	2·04
7 ...	16 31 14 ...	57 30·2 ...	0·2928	
9 ...	16 32 50 ...	57 4·9 ...	0·2871 ...	2·26
11 ...	16 34 38 ...	56 39·9 ...	0·2812	
13 ...	16 36 36 ...	+56 15·1 ...	0·2751 ...	2·52

Here the intensity of light at discovery on September 2 has been taken as unity.

The comet will be observable in this hemisphere up to perihelion passage, and in the other hemisphere may probably be followed until midsummer or later. The following approximate positions are derived from MM. Schulhof and Bossert's corrected elements:—

At Greenwich Midnight

1884.	R.A.	Decl.	Log. distance from Earth.	Sun.
	h. m. s.			
Jan. 28 ...	0 19·7 ...	-23 25 ...	9·8966 ...	9·8901
Feb. 25 ...	1 31·1 ...	45 37 ...	0·0637 ...	9·9841
March 26 ...	2 37·4 ...	57 29 ...	0·1413 ...	0·1252
April 25 ...	4 43·8 ...	67 2 ...	0·1760 ...	0·2387
May 25 ...	8 27·5 ...	68 36 ...	0·2270 ...	0·3268
June 24 ...	11 9·0 ...	-59 56 ...	0·3171 ...	0·3972

The comet will arrive at its least distance from the earth on January 9, and as the moon draws off in December may be expected to be a naked-eye object.

A NEW COMET.—The *Dun Echt Circular*, No. 81, and the *Astronomische Nachrichten* notify the discovery of a comet by Mr. Lewis Swift at the Warner Observatory, U.S., on September 11. The following approximate positions are given:—

	G.M.T.	R.A.	Decl.
September 11·000 ...		280 29 ...	+73 9
13·501 ...		276 30 ...	73 8

M. TROUVELOT'S RED STAR.—It has been mentioned that during the totality of the solar eclipse of May 6, at Caroline Island, M. Trouvelot saw a decidedly red star "a little to the north and a little to the west of the sun." He now states that on September 5 and 7 he examined the part of the sky where the sun was then situate with a telescope of the same aperture that he used in observing the eclipse, and with the eyepiece then employed he recognised the two white stars which he had noted as 41 and ϵ Arietis, but the red star was not found, even though he swept to a much greater distance than any probable error of his observation would allow. On this circumstance he remarks: "Bien que l'absence d'une étoile rouge aussi brillante que celle que j'ai observée durant l'éclipse semble tout naturellement conduire à supposer que l'astre en question n'était autre qu'une planète intra-Mercurielle, cependant, comme les éléments les plus nécessaires, tels que la position et un disque ou une phase sensible, manquent à mon observation, je crois qu'il est de mon devoir de me tenir sur la réserve et de suspendre quant à présent mes conclusions sur la nature probable de cet astre."

The place of the sun at the middle of totality at Caroline Island was in R.A. 2h. 52m. 28s., Decl. +16° 31'·0 for the epoch of the *Durchmusterung* (1855·0).

GEOGRAPHICAL NOTES

A MOST improbable report appears in a Danish paper as to the violent death of Lieut. Greeley, of the U.S. Arctic Expedition. It is stated that the information was obtained from some Eskimo by Hans Hendrik, who accompanied Dr. Nathorst

to Cape York; but Baron Nordenskjöld's telegram and the letters from Dr. Nathorst which we print to-day evidently prove that the report is quite untrustworthy.

THE last number of the *Izvestia* of the Russian Geographical Society brings us further information about the proposed expedition of Col. Prejevalsky to Tibet. The indefatigable Central-Asian traveller has been taught by experience that one of the greatest difficulties during long journeys is the transport of the scientific collections which steadily grow as the traveller advances on his journey. He intends, therefore, to leave them at several stations, where a few of his men will remain with the collections, continuing at the same time the exploration of the surrounding country. He will start from Kiakhta for Urga, leaving that town this month for the Tsaidam, *viâ* the Alashan and Kookoo-nor. At Dzun-zasak he will establish his first station. Leaving it in February next, he proposes to go towards the Yellow River and the towns Chamdo and Batang. If circumstances be favourable, he will spend the summer in the land of the Si fans, situated between Lake Kookoo-nor and Batang, which land promises a rich crop of scientific information. If it be impossible, he will explore the eastern part of the plateau of Northern Thibet, and return to his station, take there his luggage, and transport it to Hast in the Western Tsaidam, where a second station will be established. Therefrom he will try to penetrate into Northern Thibet, towards Lhassa and Tengri-nor. If he succeeds in that, M. Prejevalsky will go either to the Dzang Province, and thence follow up the Brahmaputra, or north-west towards Ladak and Hast, which may be reached about the spring of 1885. The expedition would be divided there into two parties going by two different routes to Loh-nor, thence to Karakorum and, *viâ* Ak-sou, to Issyk-koul in Turkestan. Such is the scheme of this great expedition, which is intended to bring within the domain of science such parts of Thibet as we know only from the descriptions of the pundits and of a few missionaries. The more than 50,000 roubles which are necessary for covering the expenses have already been granted by the Russian Government.

WE learn from the same periodical that two other expeditions of great interest have been organised by the Geographical Society for this summer. M. Adrianoff, who already has made explorations in the Altay and Sayan Mountains, will explore the highlands west of Minusinsk; and Dr. Regel, who has spent the winter at Barpanj, at the foot of the Pamir, has received the means for pursuing his explorations of the Pamir in the direction he will find most convenient. M. Potanin, who is about to start for a new expedition to Southern Mongolia and Hansoo, intends also to establish one or two stations, where part of his luggage will be left, with some of his men, who will there make meteorological observations. Thanks to a gift of 15,000 roubles, which was made for this purpose by M. Soukacheff, the expedition of M. Potanin will be accompanied by a topographer, and by M. Berezovsky, who will make scientific collections. They have started on board the frigate *Minin*, which will land them at Pe-che-li, whence they will proceed, *viâ* Peking, to Min-jou, and establish there their first station.

THE chief of the Dutch expedition, Dr. Snellen, has made the following report to the Meteorological Institute of Utrecht:—On October 9, 1882, the scientific observations were commenced. On November 3 the vessel began to suffer from the ice, for which reason we deemed it advisable to camp in tents on the ice. On November 8 we again went on board, the vessel having been made habitable. On December 7 a hut for observations was erected on the ice, but on the 8th the ice again began to drift, separating the same from the ship. It was afterwards recovered. On December 24 the *Varna* was so damaged by the ice that it was dangerous to remain on board, and we consequently went on board the *Dijmphna*, where our observations were for a time continued. On January 15 the observations in the hut on the ice were resumed. On January 25 the greatest cold—47°·2 C.—occurred. On April 6 the first water was seen in the ice, and in the beginning of June the road between the ship and the vessel became impassable through the thawing of the ice. On June 11 the ice began to move, and became loose around the *Dijmphna*. On June 22 new ice one centimetre in thickness was formed. On July 24 the *Varna* foundered. On August 1 the expedition and the crew of the *Varna* left the *Dijmphna* with boats and sleighs. On August 16 land was seen. On the 19th an island in the Kara Strait was passed, and on the 20th we landed on Waigatz Island. On the 25th we

met the steamers *Nordenskjöld*, *Obe*, and *Louise*, the last named of which the expedition went on board. Outside Yugor Schar the *Louise* lost her propeller, and had to be taken in tow to Hammerfest by the *Nordenskjöld*. On August 30 we landed at Vardö.

THE leading paper in Heft ix. of Petermann's *Geographische Mittheilungen* accompanies a map of the two principal, almost exclusive, nationalities of Bohemia, the Germans and the Czechs. At the last census of Austria-Hungary, on December 31, 1880, the Czechs in Bohemia amounted to 3,470,252, the Germans to 2,054,174; in all, 5,524,426. Unfortunately the column of the census paper designed for the specifications of the nationality of each inhabitant was headed "Umgangssprache" (literally, the language of ordinary intercourse), a word by no means best calculated to educe in any case the national leaning of the person filling it up. On comparing this last census with former ones, it appears that the German and Czech elements maintain about the same numerical relation to each other in Bohemia as they had continued to do throughout the three previous decades. Their present proportions are thirty-seven Germans to sixty-three Czechs. The Czechs are in strongest force in the centre, while the surrounding provinces, especially those of the north-west, are chiefly occupied by the Germans. Local fluctuations in the relative proportions of the two nationalities occur principally in the districts where the two are most mixed or where they border on each other in industrial, manufacturing, and mining, especially extensive coal-mining districts, and in places in which there has been a rapid increase of population. In almost none of these cases, however, has the former character of any quarter been changed. It is observable that the Germans in predominately Czech districts generally cohere in isolated communities, whereas the Czechs in corresponding cases are disposed to assimilate to the preponderating foreign element. In proportions ranging as low as from one per cent. to one per thousand, Germans are to be found everywhere throughout Bohemia, except in the district of Blatna, where they muster only 43 against 52,522 Czechs. Czechs, again, are totally wanting in the Asch and Plau districts, and number less than one-thousandth of the population respectively of Gabel, Graslitz, Schluckenau, and Tepl. Elsewhere in proportions ranging from one-thousandth to one per cent. and upwards, they are diffused all over the kingdom. Other nationalities than those of Germans and Czechs are found in Bohemia in diminishingly small numbers: Poles reaching 1303, Ruthenes 1285, Italians 141, other nationalities falling short of the number of 100. It is further found that while Bohemians in foreign countries, chiefly in Western Austria and Germany, amount to 490,565, the number of foreigners in Bohemia is only 80,236, drawn, too, chiefly from Western Austria and Germany.

DR. EMIN BEY, continuing his tour through the Mudiñ Rohl, gives a description of the country he traversed between Biti and Buñ, more particularly the river Lau or Doghurguru, as, along with other names, it is variously called by the natives in various parts of its course. Rumbek, the principal place of the Mudiñ Rohl, and the Agahr, and other Dinka tribes are next described; then the country passed in traversing the province of Gohk as far as the Roah River, and back to Jalo; the Lori land and the Upper Jalo to Sajadih, with the march back to Jado.

In another article an interesting sketch is given regarding the progress of the cartography of the peninsula of Corea, accompanying which is a map of the country based on the one published in 1875 by the Ministry of War at Tokio, and embracing all the latest tracings of the coast.

THE last volume (thirty-eighth) of the *Memoirs of the Topographical Department of the Russian General Staff* contains, besides the usual reports on the geodetical and topographical operations in Russia, the following memoirs:—On the measurement of the base on a string during the trigonometrical survey of Bulgaria, by Col. Lebedeff; on the measurements of the pendulum made in India, by General Stebnitsky; results of levellings made during the years 1871 to 1877 along Russian railways, by Col. Tillo. It results from these levellings, which were made with a very great degree of accuracy, that the level of the Baltic Sea at Dunamunde is 2.10 feet lower than at Cronstadt. The possible error is ± 0.91 feet.

M. LESSAR has written to the Russian Geographical Society from Askabad, on June 16, that he has explored the Ongouz River, which was known only in its upper parts. Even the

Tekkes did not know the route to the east of Mirza-chile. The journey was very difficult. The bed of the Ongouz being very undefined, the expedition often lost its way. The *kaks* or cisterns were empty, as there was not a single strong rain in April. Still M. Lessar reached Kavakhly, and thence proceeded to Khiva, whence he returned to Askabad *via* Mirza-chile. When writing his letter he was ill, and unable to continue his journey.

THE BRITISH ASSOCIATION

REPORTS

Report of the Committee, consisting of Lieut.-Col. Godwin-Austen, Dr. G. Hartlaub, Sir J. Hooker, Dr. Günther, Mr. Seebohm, and Mr. Sclater (Secretary), appointed for the purpose of investigating the Natural History of Socotra and the adjacent Highlands of Arabia and Somali Land.—Prof. Bayley Balfour's labours on the botanical collection made in Socotra are nearly brought to a close, and the results will shortly be published in a volume of the *Transactions of the Royal Society of Edinburgh*. The value and completeness of this memoir will be much increased by the additional specimens subsequently obtained in Socotra by Dr. Schweinfurth, which have been lent to Prof. Balfour by the collector. The fresh-water shells collected by Prof. Balfour have been described by Lieut.-Col. Godwin-Austen in a paper read before the Zoological Society of London in January last, and published in the first part of their *Proceedings* for the present year. The Diatomaceæ have been examined by Mr. Kilton of Norwich, and described in a paper which will be read before the Zoological Society of London during their next session.

Report of the Committee, consisting of Sir Joseph Hooker, Dr. Günther, Mr. Howard Saunders, and Mr. P. L. Sclater (Secretary), appointed for the purpose of Exploring Kilimanjaro and the adjoining Mountains of Eastern Equatorial Africa.—The Committee having been unsuccessful in obtaining the services of a conductor for this expedition, nothing has been done.

Report of the Committee, consisting of Mr. John Cordeaux (Secretary), Mr. J. A. Harvie-Brown, Mr. P. M. C. Kermode, Prof. Newton, Mr. R. M. Barrington, and Mr. A. G. More, reappointed at Southampton for the purpose of obtaining (with the consent of the Master and Brethren of the Trinity House, and the Commissioners of Northern and Irish Lights) Observations on the Migration of Birds at Lighthouses and Lightships, and of reporting on the same.—The General Report of the Committee, of which this is in fact an abstract, comprises the observations taken at lighthouses and light-vessels, and a few special land stations, on the east and west coasts of England and Scotland, the coasts of Ireland, Isle of Man, Channel Islands, Orkney and Shetland Isles, the Hebrides, Faroes, Iceland, and Heligoland, and one Baltic station—Stevns Fyr on Stevns Klint, Zealand, for which the Committee is indebted to Prof. Lütken of Copenhagen. Altogether 196 stations have been supplied with schedules and printed instructions for registering observations, and returns have been received from about 123—a result which is very satisfactory, showing as it does the general interest taken in the work, and the ready cooperation given by the lightkeepers in assisting the Committee.

As in preceding years, the line of autumn migration has been a broad stream from east to west, or from points south of east to west of west, and covering the whole of the east coast. In 1880, to judge from the returned schedules, a large proportion of the immigrants came in at the more southern stations; in 1881 they covered the whole of the east coast in tolerably equal proportions; but in 1882 the stations north of the Humber show a marked preponderance of arrivals. Altogether a vast migration took place this year upon our east coast, the heaviest waves breaking upon the mouth of the Humber, Flamborough Head, the Farn Islands, Isle of May at the entrance to the Firth of Forth, and again, after missing a long extent of the Scotch coast, at the Pentland Skerries. The Bell Rock also came in for a share, although apparently a much smaller one than the Isle of May. The easterly winds prevailed all along our east coasts, generally strong to gale, and the succession of south-easterly and easterly gales in October, between the 8th and 23rd, occurring as they did at the usual time of the principal migration, brought vast numbers of land birds to our shores. From the Faroes in the north to the extreme south of England this is found to have been the case.